

Soil and Water Remediation, Groundwater/Vadose Zone (RL-0030)

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Installing NR-2 Injection Wells

Overview

This section addresses Project Baseline Summary (PBS) RL-0030, *Soil and Water Remediation Groundwater/Vadose Zone*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of January 2006.

Notable Accomplishments

Well Drilling: To date, eight Calendar Year (CY) 2006 wells are complete, and two CY 2007 wells are complete. Four Tri-Party Agreement (TPA)-required wells are in progress. Planning moved forward to start seven more TPA wells in February. Non-TPA drilling activities made significant progress. Eight wells were installed in 100-N Area (see "Cleaning up Strontium-90" below). An additional ten wells were started there for the actual apatite injections. Four wells were also planned to support uranium cleanup in the 300 Area just north of Richland.

Bringing New Technologies to Hanford to Protect the River: Fluor Hanford and the Pacific Northwest National Laboratory (PNNL) worked with RL to support a workshop conducted by EM-21 to identify and select technologies that could be used on the Hanford Site to more effectively address contamination in groundwater. A particular emphasis was placed on contaminant plumes that were immediately next to, and entering, the Columbia River. Congress had identified \$10 million to direct towards these efforts. The two-day workshop resulted in eleven proposals totaling \$9.5 million moving forward for final review. Seven of the proposals focus on actions to help understand and accelerate cleanup of chromium, strontium-90 (Sr-90), and uranium along the river. The other four proposals target aspects of carbon tetrachloride and technetium-99 (Tc-99) cleanup in the central part of the site. A follow-up meeting with DOE-HQ is scheduled for mid-February. Final approval and funding authorization is currently planned for March/April.

Cleaning up Sr-90 Along the River: Fluor Hanford worked with CH2M HILL Hanford Group, Inc. (CH2M HILL) to use a drilling technology in the 100-N Area that had been successful in the Tank Farms to install eight monitoring points to support a test of the apatite injection process. The technology uses a hydraulic hammer mounted on a backhoe to drive small-diameter pipe into the soil. Wells were installed in the Hanford and Ringold units to monitor the placement and effectiveness of the apatite. Arrangements are being made with CH2M HILL to bring its drill back to 100-N following the test being done by CH2M HILL in the 200 Areas to complete the work.

In addition:

- Completed installation of eight wells at N Area for pilot test in April
- ProSonic slant drill rig on site for pre-drilling activities
- Completed EM-21 \$10M workshop; \$9.5M tentatively allocated. Follow-up underway
- EM-21 Workshop
- Completed a workshop with EM-21 personnel to select proposals for work to be implemented in FY 2006 and FY 2007 to address contaminant movement to the Columbia River. The selected proposals are:
 - 300 Area polyphosphate treatability test to immobilize uranium \$1.6M
 - Design and test infiltration of phosphate/apatite technology for Sr-90 at 100-N \$0.8M
 - Perform treatability test for phytoremediation for Sr-90 at 100-N \$0.4M
 - Refine location of source(s) of Chromium at 100-D \$0.8M

Notable Accomplishments, continued

– Inject micron-sized iron into deteriorating portions of the ISRM	\$0.9M
– Test electrocoagulation at 100-D (Initial phase of the proposal)	\$2.2M
– Calcium polysulfate upgradient of ISRM (Initial phase of the proposal)	\$1.0M
– Nanoparticle metal phosphate barrier for Tc-99 (Initial phases only)	\$0.7M
Follow-up work to develop CCl-4 conceptual model	
– Demonstrate abiotic degradation of CCl-4	\$0.3M
– Follow-up to Vista work (new proposal)	\$0.8M
Total	\$9.5M

FY 2006 Funds vs. Spend Forecast (\$M)

	Projected FY 2006 Funding	FY 2006 Fiscal Year Spend Forecast	Variance
Soil & Water Remediation, Groundwater/Vadose Zone	\$ 48.1	\$ 49.7	\$ -1.7

FY 2006 Schedule/Cost Performance (\$M)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
Soil & Water Remediation, Groundwater/Vadose Zone	\$12.0	\$12.2	\$12.7	\$0.1	1.0%	(\$0.6)	-4.8%	\$44.4

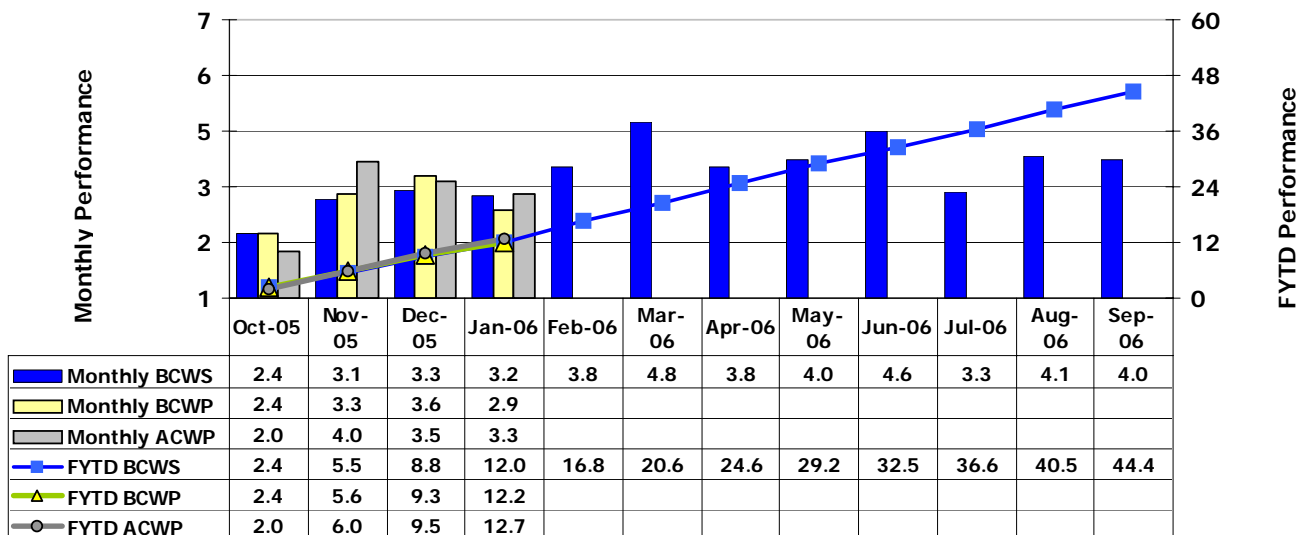
Numbers are rounded to the nearest \$M and include the closure services allocations.

Schedule Performance (\$0.1M/1.0%). Variance within threshold; no explanation required.

Cost Performance (-\$0.6M/-4.8%). Variance within threshold; no explanation required.

FY 2006 Schedule/Cost Performance (\$M), continued

Performance Analysis FYTD and Monthly (\$M)



Milestone Achievement

PBS	MSN	Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
RL-0030	M-24-57G	Install a Cumulative of 45 Wells by December 31, 2005	RL	12/31/05	08/16/05		COMPLETE
RL-0030	M-24-57J	Install a Cumulative of 60 Wells by December 31, 2006	RL	12/31/06		07/31/06	
RL-0030	M-15-48A	Submit Draft A 200-ZP-1 CERCLA Remedial Investigation Report to EPA	RL	05/31/06		05/31/06	